INFORMATION TECHNOLOGY

PROJECT MANAGEMENT

FOR

TIER III HIGHER EDUCATION INSTITUTIONS

AND INDEPENDENT AGENCIES

APRIL 2009

APA

**Auditor of
Public Accounts**

COMMONWEALTH OF VIRGINIA

AUDIT SUMMARY

Our audit of the Information Technology Project Management for Tier III Higher Education Institutions and Independent Agencies found:

- All Tier III institutions have developed and adopted IT project management policies and procedures as mandated by the *Restructured Higher Education Financial and Administrative Operations Act of 2005;* however, the College of William and Mary should apply its policies and procedures institution-wide.

- Although some independent agencies have developed IT project management policies and procedures that are in alignment with industry best practices, we recommend the State Lottery Department, Virginia Worker's Compensation Commission and the Virginia College Savings Plan formally adopt such policies and procedures.

- Virginia Tech, Virginia Commonwealth University, the University of Virginia, the Virginia Retirement System, and the State Corporation Commission have developed adequate IT project management policies and procedures, and are properly following their policies and procedures on current projects.

- T A B L E   O F   C O N T E N T S -

INTRODUCTION

Objectives and Scope

Our audit reviewed the adequacy of information technology (IT) project management policies and procedures for Tier III higher education institutions and independent agencies. Tier III institutions and independent agencies are exempt from following the Commonwealth's Project Management Standard and therefore must develop and adopt their own. The objectives of our audit are to determine that:

- Tier III institutions have developed IT project management policies and procedures as mandated by the *Restructured Higher Education Financial and Administrative Operations Act of 2005* and these policies and procedures are in alignment with industry best practices.

- Independent agencies have developed IT project management policies and procedures that are in alignment with industry best practices.

- Tier III institutions and independent agencies have implemented IT project management policies and procedures and on-going projects adhere to accepted IT project management policies and procedures.

HISTORY

Higher Education Institutions

In 2005, the Virginia General Assembly passed the *Restructured Higher Education Financial and Administrative Operations Act of 2005* (Act). The Act permits the restructuring of public institutions of higher education (institutions) within the Commonwealth so that the institutions may operate with more autonomy. The bill set forth three classifications of autonomy ranging from Tier I through Tier III, with Tier III having the most autonomy over financial and operational duties.

Tier I provides for the least level of independence from the Commonwealth. Institutions under this tier must continue to follow the majority of Commonwealth policies, procedures, and guidelines. Institutions becoming Tier I obtain some autonomy in the areas of procurement, leases, capital outlay, and human resources.

As set forth in Section 23-38.88 of the Code of Virginia, an institution must commit to the Governor and the General Assembly by passing a formal resolution to meet 12 state goals to be eligible to be a Tier I institution. Of these goals, eleven are academic-related goals that the State Council of Higher Education (SCHEV) is responsible for developing and reviewing. The Governor's cabinet is responsible for developing and reviewing performance benchmarks for the remaining financial and administrative management goals.

Currently, the Tier I classification applies to the following institutions.

> Christopher Newport University
> George Mason University
> James Madison University
> Longwood University
> Norfolk State University
> Old Dominion University
> Radford University
> University of Mary Washington
> Virginia Military Institute
> Virginia State University

Tier II is the next level of autonomy. This tier is a transitional level for institutions striving to become Tier III. Tier II institutions have the option of selecting two of the following three areas to have increased independence from the Commonwealth: information technology, procurement, or capital projects, excluding leases of real property. Currently, half of the institutions listed above are applying for Tier II status, including James Madison University, George Mason University, Old Dominion University, Radford University, and Virginia Military Institute. An institution seeking IT operational authority as a Tier II institution must document specific criteria in a memorandum of understanding, including that the institution shall develop and the Board shall adopt IT policies, standards, and guidelines governing project management. During our review, we met with each of the ten institutions listed above and found that the majority of them continue to use Commonwealth's Project Management standards properly and some are beginning to develop their own internal project management standards.

Institutions classified as Tier III have the greatest amount of autonomy relating to a variety of administrative functions including capital projects, human resources, leases, financial management, procurements, and IT. Institutions who have demonstrated the ability to manage the administrative and financial operations of the institution without jeopardizing the financial integrity and stability of the

institution may enter into a management agreement with the Commonwealth to obtain the Tier III status. This management agreement requires the Board of Visitors for each institution to assume full responsibility for management of the institution and the creation of institutional policies and procedures relating to the above listed areas of autonomy.

While nothing prevents a Tier III institution from adopting the Commonwealth Project Management Standard in lieu of creating their own, Section 23-38.111 of the Code of Virginia, exempts Tier III institutions from being required to follow these standards. Instead, the Tier III institution may elect to develop and execute project management policies, standards, and guidelines based upon industry best practices.

Upon the onset of the Act, SCHEV determined that three institutions qualified for Tier III status: the University of Virginia, Virginia Polytechnic Institute and State University, and the College of William & Mary. Virginia Commonwealth University later applied for and received approval for reclassification to a Tier III in July 2008.

Independent Agencies

Independent agencies are not required to, but may voluntarily choose to follow Commonwealth Project Management Standard. When an independent agency chooses not to follow Commonwealth Project Management Standard, the agency must adopt and maintain efficient and adequate IT project management policies and procedures aligned with industry best practices.

We reviewed the following independent agencies as part of this audit.

> Virginia Retirement System
> State Lottery Department
> State Corporation Commission
> Virginia College Savings Plan
> Virginia Workers Compensation Commission

The Chesapeake Bay Program and the Virginia Office for Protection and Advocacy are also independent agencies; however, due to their small size, we did not include them in our review.

INDUSTRY BEST PRACTICES OVERVIEW

Industry best practices define the information generally recognized as good practice. In the area of project management, the Project Management Book of Knowledge (PMBOK) represents industry best practices. The PMBOK, maintained by the Project Management Institute, provides guidelines, policies, and procedures relating to project management and is the basis on which we based our review. According to PMBOK, project management policies and procedures should require that each project include a project management plan with nine key project documents: Each of these documents are important to the success of a project, however they should be used to different degrees depending on the size and risk of the project.

Document	Objective
Work Breakdown Structure(WBS)	Defines and details the list of project tasks into its simplest form. The WBS should define the scope of the project.
Resource Plan	Identifies all resources needed to complete a project. Resources include labor, equipment, and materials needed for project deliverables.
Project Schedule	Outlines planned dates for completing tasks (as identified in the WBS). The Project Schedule shows dates for meeting major project milestones and key deliverables.
Project Budget	Outlines a detailed breakdown of project cost estimates. The Resource Plan and WBS have great impacts on the project's budget.
Performance Plan	Determines if the project is meeting expectations during its development. Performance measures determine the success/failure as the project progresses.
Risk Management Plan	Identifies, monitoring, and mitigate potential risks. The Plan also identifies changing risk levels along with appropriate responses to the risks during the project.
Procurement Plan	Details how project purchases will occur.
Communications Plan	Identifies communication methodology. This Plan includes what information requires communication, how often, and to whom the information is given.
Change and Configuration Management Plan	Identifies the processes to follow when making changes to a project. This Plan also includes who and how to control changes, identify changes, and who approves the changes.

The Commonwealth of Virginia has issued its own project management policies, standards, and guidelines. We have found that the Commonwealth's standards closely follow PMBOK and therefore represent best practices. Tier I institutions are required to follow the Commonwealth Project Management Standard however; Tier II and Tier III institutions and independent agencies may elect to follow the Commonwealth's standards or adopt their own.

METHODOLOGY

Our audit methodology included interviewing project development managers and staff at all of the Commonwealth's public institutions of higher education along with independent agencies, as listed previously. The interviews allowed us to gain an understanding of the IT project management processes that each entity followed. We paid particular attention to Tier III institutions and independent agencies since they were the focus of this audit; however, we interviewed project development managers and staff at all institutions since they may be pursuing Tier II autonomy under the Act. We obtained the policies and procedures developed by the Tier III institutions and independent agencies and reviewed the policies for alignment with project management industry best practices contained in PMBOK. Appendix A details the criteria we used in measuring the adequacy of policies and procedures.

Where a Tier III institution or independent agency had adequate policies and procedures and had an active systems development project underway or recently completed, we selected a project to verify that the institution or agency is following their specified standards. For institutions or agencies with inadequate policies and procedures, we did not select a current or completed system development project for review.

AUDIT RESULTS – TIER III INSTITUTIONS

<u>Virginia Polytechnic Institute and State University (Virginia Tech)</u>

Virginia Tech is a large institution with many departments. To maintain oversight and control in its decentralized environment, the IT policies require that all departments comply with the project management policies and procedures. Most departments would need to request special budget allocations to obtain funds necessary to implement a major project. In addition, a special group reporting to the Vice President for Information Technology and CIO's organization, IT Acquisitions, assists in the procurement of computer hardware, systems, and services. Both processes help to ensure major projects are identified so proper policies and procedures are being followed for the entire university.

Virginia Tech begins their project management approach by evaluating the classification and risk level of each project. They use internally developed project level indicators in conjunction with an IT project scorecard. The IT project scorecard defines levels of difficulty along with complexity levels, schedule risks, and budget risks for each project. The outcome of this process determines which project management process, methodology, and documentation a project will follow.

Virginia Tech's policies require the creation of a project management plan, which includes the required high-level project management documents, such as those outlined in the PMBOK. These documents include a Work Breakdown Structure, Resource Plan, Project Schedule, Project Budget, and plans for Performance, Risk Management, Communication, and Change Management. The policies also include additional descriptions of the supporting information to be included in the high-level documents, as well as details relating to the creation, development, and execution of the documents as recommended by best practices. Only two documents continue to require additional development, the Performance and Change Management Plans. Virginia Tech is currently working on expanding these two documents to incorporate the necessary detail that will make the documents in line with industry best practices.

We reviewed documentation associated with the Virtualization Server Environment project to ensure Virginia Tech properly implemented and followed the policies and procedures discussed above. Overall, we found that Virginia Tech properly followed their IT project management policies and procedures.

Virginia Commonwealth University (VCU)

As of July 2008, VCU officially gained Tier III classification under the Act. Since then, VCU has been working to develop and implement campus-wide IT project management policies and procedures although they currently follow the Commonwealth Project Management Standard. In the near future, VCU plans to adopt new project management standards along with a tracking system. We reviewed the draft policies and tracking system and found they conform to industry best practices as described in the PMBOK. Although, the draft standards do not provide the level of detail contained in PMBOK, the University is continuing to develop help screens in their tracking system along with a detailed training manual, which will provide the necessary details to be in line with industry best practices.

Project Review

VCU's last major project was the successful completion of the Banner ARIES project in 2007. This project occurred prior to the University's Tier III status and VCU fully implemented the system using the Commonwealth Project Management Standard. No new major projects are currently under development; therefore, we did not review any additional projects.

University of Virginia (The University)

The University's policies require the creation of a project management plan, which includes the required high-level project management documents as outlined in the PMBOK. These documents include a Work Breakdown Structure, Resource Plan, Project Schedule, Project Budget, and individual plans for Performance, Risk Management, Communication, and Change Management. The University's project management process details the required documents at each stage of development and addresses the level of risk associated with a project. High-risk projects must complete each of the documents outlined above, whereas medium-risk projects must complete the same documentation, but with reduced detail. Low-risk projects require less documentation. The University's is also currently expanding their project management procedures by including detailed procedures, such as what information should be included and who should prepare them.

Project Review

We reviewed documentation associated with the Student Systems Project (SSP) to ensure that the University is properly implementing and following proper IT project management policies. This mission critical project, which began in 2005, will replace the University's current Student Information System. After reviewing project documents for SSP, we found the University to have complete and adequate project management documents that are in alignment with IT project management best practices. Project documents are maintained and regularly updated to increase project management efficiency.

College of William & Mary (College)

The College's project management standard only applies to its IT Division and not the entire College. We believe the Act requires institutions to develop university-wide policies and procedures and therefore the College's current project management standards are inadequate for the purpose of Tier III status. As currently applied, departments can develop and implement systems without oversight from the IT Division's Project Management Office. To provide better governance and control over potential project management risks, the policy should apply to the entire College.

In addition, the College's project management standard requires the completion of the majority of the documents outlined by industry best practices; however, the standard only requires the creation of the project documents and does not detail what specific information these documents should include, as outlined in best practices. Without detailed project management procedures, the College significantly increases the risk of project vulnerabilities such as scope increases, budget overages, and/or scheduling issues.

Recommendation

The College should apply its project management standard to the entire College. Doing so will comply with the requirements of the Act, fully align the College with industry best practices, and significantly increase controls over system development and project management risks campus wide.

In addition, the College should strengthen its project management standard by broadening the existing procedures to include detailed document information such as the information provided in the PMBOK.

AUDIT RESULTS - INDEPENDENT AGENCIES

Virginia Retirement System (VRS)

VRS' Project Management policies and procedures outline the process used to categorize IT projects according to its level of complexity and risk. The project team categorizes the project by defining the project's business purpose, core affected activities, time, budget, and alternative solutions. This process aids in determining the best approach to executing the project's goal/purpose and culminates into on overall project classification.

VRS' policies and procedures properly identify detailed steps necessary in establishing the project charter as well as the initial planning phase. The project plan requires the documents outlined by industry best practices, including a Work Breakdown Structure, Resource Plan, Project Schedule, Project Budget, and plans for Performance, Risk Management, Communication, and Change Management.

Project Review

VRS' most recent systems development implementation is the VRS Modernization project, which is currently in the project initiation phase. Therefore, we could not review project documents at this time as they are still under development

State Corporation Commission (SCC)

The SCC is responsible for overseeing various business and economic interests of the Commonwealth; therefore, maintaining proper IT project management governance is a priority. Over the past year, SCC has worked to restructure their project management practices into a more centralized function. The SCC has developed, and is continuing to develop, proper procedures for IT project management. To improve the selection process of IT projects, the SCC is considering the creation of an Investment Control Board as one approach to providing guidance when making investments in information technology.

The SCC follows the Commonwealth's definition of major and non-major project to classify its projects. Specifically, non-major projects are those costing less than $1 million and major projects typically cost more than $1 million or are mission critical.

SCC policies require IT projects to include, at minimum, high-level project management documents as required by industry best practices such as PMBOK. The agency's policies include the need to develop a Work Breakdown Structure, Resource Plan, Project Schedule, Project Budget, and plans for Performance, Risk Management, Communication, and Change Management. Policies and procedures for each project document provide detailed steps to have complete and efficient project documentation.

Project Review

The SCC is currently implementing the eSCC Financials (eSCC) project, which they consider mission critical. The purpose of the project is to automate and streamline many of the SCC's business processes that are currently manual. We found that the SCC is adhering to its policies for IT projects. With the eSCC Financials project being a high risk, mission-critical project, appropriate project management procedures are taking place. Key project plans, as documented in SCC's policies and procedures, have been developed and executed as necessary.

State Lottery Department (Lottery)

The Lottery does not have formally documented IT project management policies and procedures. It has developed a high-level project management methodology, as well as a detailed strategic plan; however, these documents do not require the completion of a project management plan for development efforts as outlined by industry best practices. In addition, the majority of the detail supporting an effective project management plan does not exist, including the key project documents described previously in this report.

Recommendation

Although the Lottery is not currently implementing any systems development projects, they should develop and implement project management policies and procedures that align with industry best practices or formally adopt the Commonwealth Project Management Standard. Doing so will increase controls over future system development efforts and reduce project management risks.

The Virginia Workers' Compensation Commission (Commission)

The Commission currently has no formally documented IT project management policies and procedures. Without detailed IT project management policies and procedures, the Commission significantly increases project vulnerabilities such as scope increases, budget overages, and/or scheduling issues.

The Commission should develop detailed IT project management policies and procedures to align with industry best practices or formally adopt the Commonwealth Project Management Standard. Doing so will improve project oversight, as well as significantly increase controls over system development and project management.

Virginia College Savings Plan (VCSP)

The VCSP currently follows, but has not formally adopted, the Commonwealth Project Management Standard. We understand the VCSP has recently begun the process of developing its own project management policies and procedures.

Recommendation

The VCSP should continue developing its project management policies and procedures. In the interim, the VCSP should formally adopt the Commonwealth Project Management Standard until its own policies and procedures are complete.

Commonwealth of Virginia

April 20, 2009

The Honorable Timothy M. Kaine
Governor of Virginia
State Capital
Richmond, Virginia

The Honorable M. Kirkland Cox
Chairman, Joint Legislative Audit
 and Review Commission
General Assembly Building
Richmond, Virginia

We have audited institutions of higher education and independent agencies project management policies and procedures and are pleased to submit our report entitled **Information Technology Project Management for Tier III Higher Education Institutions and Independent Agencies**. We conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Exit Conference and Report Distribution

We discussed this report with management of the Tier III institutions and independent agencies described in this report. Management's response has been included at the end of this report.

This report is intended for the information and use of the Governor and General Assembly, management, and the citizens of the Commonwealth of Virginia and is a public record.

AUDITOR OF PUBLIC ACCOUNTS

KKH/clj

The College Of
WILLIAM&MARY

Information Technology   *Office of the Chief Information Officer*
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To: Walt Kucharski, Auditor of Public Accounts, Commonwealth of Virginia

From: Courtney Carpenter, Chief Information Officer, College of William and Mary

Date: May 05, 2009

Re: Project Management Review Response

The College of William and Mary will review and edit our Project Management
Policies, Standards, and Guidelines to ensure they include sufficient detail and are
in alignment with industry best practices. Specifically, the College will identify the
documents required for a project and detail what each required document must
include. The College will complete this process no later than June 30, 2009.

Project Management Policies, Standards, and guidelines will be applied to campus
wide projects where appropriate.

May 5, 2009

Mr. Walter J. Kucharski
Auditor of Public Accounts
101 North 14th Street
Richmond, Virginia 23219

Dear Mr. Kucharski:

Attached are the Virginia Lottery's responses to the Auditor of Public Accounts Information Technology Project Management for Tier III Higher Education Institutions and Independent Agencies for inclusion in the auditor's report.

Enhance Information Technology Project Management Policies and Procedures

For over twenty years, the Virginia Lottery has been continually committed to ensuring the security, integrity, and availability of our systems. In 2007, the Virginia Lottery completed a comprehensive systems conversion, implementing a contract with an external vendor to provide and operate the full gaming and communications network. Coincident with this process, the Virginia Lottery has been developing and implementing its new strategic planning process and strategic management practices. We are currently developing standards for management of significant initiatives and will formalize IT project management policies and associated procedures to clarify and document our project management methodology in our continuing effort to improve operations. The Lottery will manage IT projects in accordance with Virginia Information Technologies Agency Project Management standard ITRM CPM 112-02 and guideline ITRM CPM 110-01, as modified in Lottery specific policies, standards, or procedures.

Lottery management reiterates its commitment to ensuring our Information Technology Project Management Policies and Procedures remain effective. Prioritization and allocation of resources for this initiative will continue to occur based on areas of greatest risk and business necessity.

Please contact me if you have any questions.

Very truly yours,

Paula I. Otto

Timothy M. Kaine
Governor

Paula I. Otto
Executive Director

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CHIEF DEPUTY COMMISSIONER

IRIS C. PEACE, CLERK

May 5, 2009

Walter J. Kucharski
Virginia Auditor of Public Accounts
101 North 14th Street
Richmond, VA 23219

   RE: Independent Agencies Project Management Policies and Procedures
      Performance Audit

Dear Mr. Kucharski:

Thank you for the opportunity to provide our management response to your report concerning our agency's results in the above named audit. We would like to respond that we are currently in the process of developing detailed IT project management policies and procedures to align with the Commonwealth Project Management Standard. We anticipate having these IT project management policies and procedures formally documented by July 1, 2009.

Very truly yours,

Matthew Bryant
Director, Program Management Office

Cc: Hon. Virginia R. Diamond, Chair
   Edward P. Rice, Comptroller
   R. Matthew Cole, CIO

Virginia College Savings Plan℠

May 5, 2009

Mr. Walter J. Kucharski
Auditor of Public Accounts
P.O. Box 1295
Richmond, VA 23218

Dear Mr. Kucharski:

We would like to take this opportunity to thank you and your representatives for their attention to our operations, specifically in regards to our project management policies and procedures. We are committed to a high standard of risk assessment, internal controls and compliance at all levels within the Virginia College Savings Plan. In this effort, we consistently strive to ensure our policies and actions reflect our commitment to processes that comply with industry best practices.

As a result of our strategic management efforts we identified the need to adopt formal project management policies and procedures. Since our consultation with your office, we have adopted the Commonwealth's Project Management Standard and begun the development of our project management policies and procedures.

Sincerely,

Mary G. Morris

Mary G. Morris, Executive Director
Virginia College Savings Plan
9001 Arboretum Parkway Richmond, VA 23236
Phone 804-786-0719   Toll-free 1-888-567-0540
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Project Classification			
Not every project requires the same degree of rigor. Classifying projects will determine which project documents are required for each type of project.			
Determine that the entities policy establishes Project Classifications.			
Question	**Yes**	**No**	**Best Practice/Commonwealth Project Management (PM) Standard Reference**
Does the policy classify projects base d on scope and define which docum ents m ust be completed based on the classification?			PMBOK pg. 88-89 PM Std pg. 14
Document the classification structure outlined in the policy here:			
Comments:			

Project Charter			
A project charter is the document that formally authorizes a project.			
Determine that the entity's policy establishes a Project Charter.			
Question	**Yes**	**No**	**Best Practice/Commonwealth Project Management (PM) Standard Reference**
Does the entity's policy r equire a proj ect charter for sy stems development projects? If no then proceed to the next section.			PMBOK pg. 81 - 82 PM Std pg. 24
Does the policy require the Charter to include, at minimum, the following information:			
The business needs of the project?			PMBOK pg. 81 PM Guideline pg. 2-46
The project purpose or justification?			PMBOK pg. 82 PM Guideline pg. 2-46
Assigned Project Manager and authority level?			PMBOK pg. 82 PM Guideline pg. 2-47
Resources in cluding; people, facilities, equipm ent, and funding?			PMBOK pg. 82 PM Guideline pg. 2-48
The roles and responsibilities for all stakeholders identified on the project team?			PMBOK pg. 82 PM Guideline pg. 2-47
Summary milestone schedule?			PMBOK pg. 82 PM Guideline pg. 2-47
Does the poli cy require quantitative or qualitative analysis to justify the initi ation of the project (i.e. feasibility analy sis, cost-benefit anal ysis, ROI, etc.)?			PMBOK pg. 82 PM Guideline pg. 2-12
Comments:			

Project Management Plan			
A Project Management Plan guides execution and control of the project.			
Determine that the entity's policy requires a project plan for their systems development initiatives.			
Question	**Yes**	**No**	**Best Practice/Commonwealth Project Management (PM) Standard Reference**
Does the entity's policy require a Project Plan for systems development projects? If no then proceed to the next section.			PMBOK pg. 88 - 89 PM Std pg. 28
Does the policy require the Project Plan to include, at minimum, the following documents:			PMBOK pg. 88 - 89 PM Std pg. 28
Work Breakdown Structure?			
Resource Plan?			
Project Schedule?			
Project Budget?			
Performance Plan?			
Risk Management Plan?			
Procurement Plan?			
Communications Plan?			
Change and Configuration Management Plan?			
Comments:			

Work Breakdown Structure (WBS)			
A Work Breakdown Structure is a decomposition of the work to be executed by the project team, to accomplish the project objectives and create the required deliverables.			
Determine that the entity's policy requires performing a WBS to help organize and define the scope of the work.			
Question	**Yes**	**No**	**Best Practice/Commonwealth Project Management (PM) Standard Reference**
Does the entity policy require the use of a WBS? If no then proceed to the next section.			PMBOK pg. 112 PM Std pg. 28
Does the policy include the following in relation to the WBS:			
The need for the WBS to decompose tasks into the lowest level components that is reasonable for the project?			PMBOK pg. 114-116 PM Guideline pg 3-28 – 3-30
Corresponding schedule, time estimate, and cost estimate for each task in the WBS in order to monitor and control the tasks?			PMBOK pg. 112 PM Guideline pg 3-29 – 3-30
The requirement to have each component assigned to a specific responsible party who will plan, control, and execute the task?			PMBOK pg. 115 PM Guideline pg 3-30
Does the policy require the WBS to be supported by a WBS Dictionary?			PMBOK pg. 117 PM Guideline pg 3-30
Comments:			

Resource Plan

A resource plan is a means of identifying and organizing resources necessary to complete the project.
Determine that the entity's policy requires the creation of a resource plan.

Question	Yes	No	Best Practice/Commonwealth Project Management (PM) Standard Reference
Does the po licy require the project to have a Resource Pl an? If no then proceed t o the next section.			PMBOK pg. 135 PM Std pg. 28
Does the p olicy require the resourc e plan to include, at minimum:			
The resource s available f or the projec t (persons, equipment, materials)?			PMBOK pg. 135 PM Guideline pg 3-46
The required skills of the resources?			PMBOK pg. 135 PM Guideline pg 3-46
The quantities of resources to be used?			PMBOK pg. 135 PM Guideline pg 3-46
The resource costs?			PMBOK pg. 161 PM Guideline pg 3-46
The project team selection process?			PMBOK pg. 209-210 PM Guideline pg 7-8
Key factors in selecting me mbers of the project team?			PMBOK pg. 209-210 PM Guideline pg 7-8
The authorit y assigned t o the projec t sponsor, project manager, and an y other im portant team positions?			PMBOK pg. 209-210 PM Guideline pg 7-8
Comments:			

Project Schedule

A project schedule provides a graphical representation of the project's life.
Determine that the entity's policy requires the creation of a project schedule.

Question	Yes	No	Best Practice/Commonwealth Project Management (PM) Standard Reference
Does the policy require the project to have a Project Schedule? If no then proceed to the next section.			PMBOK pg. 123 PM Std pg. 28
Does the policy require the project schedule to include, at minimum:			
Logical sequencing of tasks?			PMBOK pg. 130 PM Guideline pg 3-56
Activity duration estimating?			PMBOK pg. 139 PM Guideline pg 3-56
A schedule that represents the most efficient and effective work effort and can serve as a baseline against which progress can be tracked?			PMBOK pg. 143 PM Guideline pg 3-57
Comments:			

Budget Plan (BP)			
A budget plan is the organization of available funds and costs.			
Determine that the entity's policy requires the creation of a budget plan.			
Question	**Yes**	**No**	**Best Practice/Commonwealth Project Management (PM) Standard Reference**
Does the policy require the project to have a budget plan? If no then proceed t o the next section.			PMBOK pg. 157 PM Std pg. 28
Does the budget plan re quire that a budget-t o-actual analysis be performed throu ghout the project's development?			PMBOK pg. 167 & 171 PM Guideline pg 3-66
Does the policy require the plan to include a contingency r eserve based upon the pot ential risk costs from the Risk Management Plan?			PMBOK pgs. 166-168 PM Guideline pg 3-67
Comments:			

Performance Plan			
A performance plan defines how a projects success or failure is measured.			
Determine that the entity's policy requires the creation of a performance plan.			
Question	**Yes**	**No**	**Best Practice/Commonwealth Project Management (PM) Standard Reference**
Does the policy require the project to have a performance plan? If no then proceed to the next section.			PMBOK pg. 179 PM Std pg. 28
Does the policy require the perfor mance plan to define metrics used in determining the performance goal?			PMBOK pg. 186 PM Std pg. 36
Does the policy require the perfor mance plan to verify t hat project results fulfill their requirements?			PMBOK pg. 190 PM Std pg. 36
Does the policy require that the plan validate that project products and services satisfy user needs?			PMBOK pg. 190 PM Std pg. 36
Comments:			

Risk Management Plan			
The risk management plan organizes how the team responds to and manages risk throughout the project. Determine that the entity's policy requires the creation of a risk management plan.			
Question	**Yes**	**No**	**Best Practice/Commonwealth Project Management (PM) Standard Reference**
Does the policy require the project to have a Risk Management plan? If no then proceed to the next section.			PMBOK pg. 237 PM Std pg. 28
Does the policy require the Risk Management plan to include:			
The need to identify risks?			PMBOK pgs. 246 PM Guideline pg 3-82
The need to prioritize and quantify identified risks, including the probability of occurrence?			PMBOK pgs. 249 & 254 PM Guideline pg 3-82
The need to plan risk responses?			PMBOK pgs. 254 PM Guideline pg 3-82
The need to identify, an alyze, and plan for new risks, while tracking identified risks?			PMBOK pgs. 264 PM Guideline pg 3-82
Comments:			

Procurement Plan			
A procurement plan identifies and plans for the purchase of products, goods, and services needed for a project. Determine that the entity's policy requires the creation of a procurement plan.			
Question	**Yes**	**No**	**Best Practice/Commonwealth Project Management (PM) Standard Reference**
Does the policy require a procurement plan? If no then proceed to the next section.			PMBOK pg. 269 PM Std pg. 28
Does the pol icy require t he plan t o i nclude the identification of the products, goods, or services to purchase?			PMBOK pgs. 274 PM Guideline pg 3-96
Does the pol icy require t he plan t o i nclude the procurement method?			PMBOK pgs. 281 PM Guideline pg 3-96
Comments:			

Communications Plan (CP)			
A communication plan outlines the information and communication needs of stakeholders.			
Determine that the entity's policy requires the creation of a communications plan.			
Question	**Yes**	**No**	**Best Practice/Commonwealth Project Management (PM) Standard Reference**
Does the policy require a communications plan? If no then proceed to the next section.			PMBOK pg. 225 PM Std pg. 28
Does the policy require the communication plan to include what, when, an d how information is collected and reported?			PMBOK pg. 225 PM Guideline pg 3-103
Does the policy require the communication plan to include reporting requirements and inform ation needs?			PMBOK pg. 228 PM Guideline pg 3-104
Comments:			

Change Management Plan			
Change management plans identify and manage change throughout a project.			
Determine that the entity's policy requires the creation of a change management plan.			
Question	**Yes**	**No**	**Best Practice/Commonwealth Project Management (PM) Standard Reference**
Does the policy require a change management plan? If no then proceed to the *Comments* section.			PMBOK pg. 96 PM Std pg. 28
Does the policy require a Change Managem ent Plan that includes:			
Establishing a method to identif y and request changes?			PMBOK pg. 96-97 PM Guideline pg 3-114
Provides a way to consistently comm unicate all changes (version control & release approval)?			PMBOK pg. 96-97 PM Guideline pg 3-114
Does the policy require some sort of change control boar d to review and approv e requested changes?			PMBOK pg. 98
Comments:			

All PMBOK references refer to **A Guide to the Project Management Body of Knowledge Third Edition.